Case Report

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Lateral Medullary Syndrome, Case Report

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Abstract

Lateral medullary syndrome (LMS), known as Wallenberg's syndrome and posterior inferior cerebellar artery syndrome, is a rare cause of stroke. Variability of presentation is cause of underdiagnose for LMS. In our case, 61-year-old male, non-diabetic, hypertensive presented with sudden onset of headache and ataxia of the gait. After clinical and radiological evaluation, he was diagnosed as LMS.

Keywords: Lateral medullary syndrome; Cerebrovascular infarction; Medulla oblongata; Ataxia; Hiccup

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Introduction

Occlusion of the posterior inferior cerebellar artery (PICA) causes the lateral medullary syndrome and infarction of lateral medulla. The typical signs and symptoms are crossed hemisensory disturbance (ipsilateral face, contralateral body), ipsilateral horner syndrome, and ipsilateral cerebellar signs. The syndrome was first described and published in 1961 [1]. It is important to diagnose lateral medullary infarction because it is associated with vertebral artery dissection in 15% to 26% of cases [2].

In 2003, Kim [3] found that the onset was sudden on most cases. Among non-sudden onset, first signs and symptoms are usually vertigo, headache, gait ataxia or dizziness. Sensory signs (as dysphagia, hoarsness and hiccups) are tended to occur later. Patients signs and symptoms are divided into very common (90%), moderately common (50% to 70%) and less common (<40%). The most common signs and symptoms are sensory symptoms/signs, gait ataxia, dizziness and Horner sign. Sensory signs and symptoms are the most frequent manifestation. Moderately common signs and symptoms are dysphagia, hoarseness, vertigo, nystagmus, limb ataxia, nausea, vomiting and headache.

There are sensory sings affecting trunk and extremities opposite site of lesion and face and cranial nerves on the same site of lesion. The syndrome is characterized with loss of pain and temperature sensation on the contralateral side of body and ipsilateral side of face [4].

Involvement of nucleus ambiguous causes dysphagia, dysarthria. If spinal trigeminal nucleus is affected, this causes absence of pain on the ipsilateral side of the face as well as absence corneal reflex. The damage to the cerebellum or the inferior cerebellar peduncle causes ataxia. Damage to the hypothalamo-spinal fibers disrupts sympathetic nervous system giving rise to Horner's syndrome. Nystagmus and vertigo are the result of involvement of vestibular nuclei. So sudden onset of severe because of this. Damage of the cranial trigeminal tract causes palatal myoclonus [4].

Case Report

M.E. 61-year-old man admitted to emergency department with sudden onset of headache that lasted for 2 h. The patient's blood pressure, heart rate, respiratory rate, SpO_2 and body temperature were 140/70 mm/Hg, 92 beats/min, 16/min, 96% and 36°C, respectively.

In his medical history, he had essential hypertension for 10 years and right hemicranial headache. In his physical examination; Horner's syndrome, hemiparesis (4/5 level of muscle strength), increased DTR, Babinski reflex positive, dysmetria, dysdiadochokinesia on the right side and ataxia were present. In observation period in emergency department, he started to have hiccups.

In the laboratory tests: white blood cells were 8000, hemoglobin was 13.0, hematocrit was 37.5, mean corpuscular volume was 84.1, plasma glucose was 142.5, blood urea was 35.2, plasma creatinine was 0.85. AST, ALT, Na, K and Cl were 15, 14.5, 142, 5.23 and 103.2, respectively.

The patient's brain CT and diffusion MR images were interpreted (or diagnosed) as normal. He was then hospitalized to the

neurology department. Magnetic resonance imaging of the brain, the right side of the medulla oblongata in the brain stem at the level of the FLAIR sequence was interpreted as signaling a high view **(Figure 1)**.

Discussion

Lateral medullary syndrome is a rare cause of stroke [4]. Generally, lesions are related to multiple vessel involvement, dissection, and poor collateral circulation is larger than those associated with single-vessel disease, atherothrombosis/cardiac embolism, and good collateralization [5]. As seen in our case, hiccups might be one of signs and symptoms. The disease can be diagnosed clinically. Imaging (Head CT/MRI) can be used to confirm diagnose. There isn't a specific treatment.

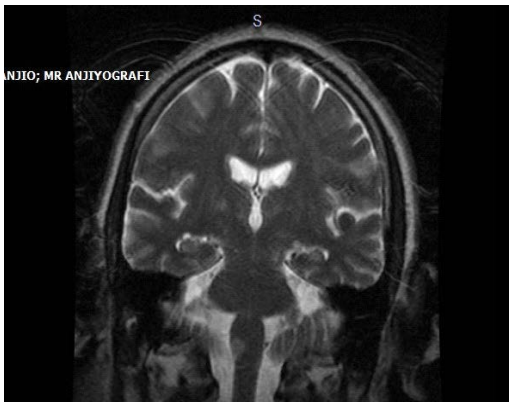

Figure 1 Magnetic resonance imaging of the brain.

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